

REMARKS

Claims 54-64 and 75-85 stand finally rejected. No claims are amended. Claims 54-64 and 75-85 remain pending.

THE BONK AND CAMILLERI REFERENCES ARE IMPROPERLY COMBINED

Before addressing each outstanding rejection in turn, Applicants would like to make the following general comments about the claims and the cited references.

Applicants respectfully maintain their position that the Examiner is combining the references in way that, while defensible and feasible, is nevertheless not the most straightforward way of combining them. If the teachings of the references are combined in a more straightforward way, the combination does not lead to the claimed invention.

The Bonk reference discloses a shoe like the one claimed, but it lacks the recited low gel sheet. In an innovation, the low gel sheet of the rejected claims is made by extruding a blend of tpu, hydroxyl functional polymer, and a "gel reducing additive." The "gel reducing additive" of the claims reacts with the tpu (polyurethane) and hydroxyl functional polymer during extrusion to form a low gel sheet. Bonk does not teach this.

On the other hand, the Camilleri reference tells how to make a polyurethane from polyisocyanate and polyol. A "gel reducing additive" (Camilleri's "high molecular weight compound having a primary or secondary hydroxyl group") is combined with isocyanate and polyol to make a low gel polyurethane from the isocyanate and polyol. The "gel reducing additive" of Camilleri reacts with isocyanate and polyol during chemical synthesis of a urethane polymer.

Applicants do not dispute that the references can be combined. In fact, Applicants submit a person of skill in the art would combine the references to achieve the benefits of a Camilleri polyurethane in a Bonk shoe. According to this combination, the combined references would teach a Bonk shoe having tpu made by the Camilleri method. The tpu in the combination would have a beneficial low gel content.

But Applicants are not claiming such a shoe. They claim a shoe having a low gel layer formed from a mixture of tpu, hydroxyl functional polymer, and gel reducing additive, as noted. Because the claimed invention does not result from a natural combination of the references, Applicants respectfully submit that the Examiner is unintentionally but impermissibly using the current specification as a guide or template to pick and choose among teachings of the prior art.

Properly combined, the references give a Bonk shoe that has a Camilleri polyurethane. Instead, Applicants' shoe has an innovative low gel layer as claimed.

Further and favorable consideration is respectfully requested on the basis of the following discussion, which largely parallels Applicants' remarks in the After Final Amendment of January 25, 2008.

REJECTIONS UNDER 35 U.S.C. § 103

Claims 54-56, 60-61 and 75-79 are rejected as obvious over the Bonk reference (U.S. Pat. No. 6,203,868) in view of the Camilleri reference (U.S. Pat. No. 3,718,622). Applicant respectfully traverses the rejection and request reconsideration.

Rejection of claims as obvious over a combination of references requires that the references when combined teach or suggest each and every limitation of the rejected claims. A prerequisite to such a rejection is a proper combining of the teachings of the references without regard to the disclosure of the applicant's claimed invention. If proper combination does not lead to the claimed subject matter, but an alternative combining is used to reject the claims, it is evidence that the references are applied with improper hindsight, based on the teachings of the applicant. When it is demonstrated that such combining has taken place, the rejection should be withdrawn and the claims allowed.

The references cannot be combined as suggested in the Office Action without improper reliance on the Applicant's own teachings. As stated in the Office Action, the Bonk reference discloses a shoe. The shoe contains one or more inflatable membranes and at least one of the membranes is a multilayer composite. The multilayer composite contains at least one flexible layer that is a blend of thermoplastic polyurethane and a hydroxyl functional polymer. See generally the Office Action at section 5. As further stated in the Office Action, the Bonk reference fails to disclose the presence of the gel reducing additive.

Importantly, the rejected claims recite a shoe, one of whose features is a low gel sheet. As stated in claim 54, the sheet is "formed from a composition comprising a blend of thermoplastic polyurethane, hydroxyl functional copolymer, and a gel reducing additive." As described in the specification, the low gel sheet is formed by for example extruding a composition comprising a blend of three ingredients. Thus, according to the invention, a blend of 1) thermoplastic polyurethane, 2) hydroxyl functional copolymer, and 3) gel reducing additive

is extruded into a low gel sheet. As developed by the Applicant, the sheet formed from the composition has a reduced amount of gel due to the presence of the gel reducing additive.

The Camilleri reference, on the other hand, deals with the synthesis of polyurethane polymers. Specifically, the reference discloses ways of making such polyurethanes that contain a reduced level of gel particles. For example, see the summary of the invention at column 1, lines 59-67:

“This invention relates to a process for the reduction of gel particles in polyurethanes. More particularly, this invention relates to a process wherein the formation of gel particles in polyurethanes is greatly reduced by employing a high molecular weight compound having a primary or secondary hydroxyl group in the reaction mixture of the organic compound containing groups reactive with isocyanato groups and an organic polyisocyanate, and to the products thus produced.”

As discussed further in the Camilleri reference, the “reaction mixture” of organic polyisocyanate, high molecular weight compound having a hydroxyl group, and organic compound containing groups reactive with isocyanato groups is used to synthesize polyurethane polymers having a reduced level of gel particles. As stated at column 3, lines 24-27

“The formation of gel particles in the polyurethane compositions is greatly reduced by employing a high molecular weight monofunctional compound having a primary or preferably a secondary hydroxyl group.”

Examples 2-6 of the Camilleri reference provide for making “cured polyurethanes” by reacting hydroxyl terminated polyesters with a diisocyanate in the presence of various “high molecular weight compounds containing a hydroxyl group.” According to Examples 2-6, the gel content of the cured polyurethanes is negligible.

The references can be combined, but not in the way suggested by the Office Action. Proper combination of the references would be based on the realization that the Bonk reference discloses a shoe containing a sheet that has a thermoplastic polyurethane and that the Camilleri reference discloses a useful way for making cured polyurethanes that contain low levels of gel. Proper combination of the reference would therefore entail preparing a polyurethane polymer according to the methods of Camilleri and using it to provide the thermoplastic polyurethane in the shoe of the Bonk reference. The person of skill in the art would combine the references in this way to provide the desirable feature of a low gel polyurethane in the shoe of Bonk. This combination is not the subject of the rejected claims.

With respect, Applicants submit that the Examiner has combined the references in a different way to arrive at the subject matter of the claims only by the improper use of hindsight based on the Applicant's description of his invention. Only Applicant has taught that a shoe can be made that contains a low gel sheet formed from a composition comprising a blend of polyurethane, hydroxyl functional copolymer, and a gel reducing additive. Absent that teaching, no one would use the Camilleri gel reducing additive in a shoe as Applicant has done. Instead, the skilled person would combine the references as noted above, to provide a shoe having a low gel tpu layer.

Indeed, the gel reducing additive of the current invention plays a different role than that in the Camilleri reference. As developed by the Applicant in earlier prosecution, the gel reducing additive in Camilleri is used during the reaction of isocyanate and isocyanate-reactive groups to form a polyurethane. On the other hand, in the current invention, the gel reducing additive is used in a composition containing a cured polyurethane and a hydroxyl functional copolymer to form a low gel sheet.

For all the reasons discussed above, Applicant respectfully submits that the claims are patentable over the cited references. When the references are properly combined, the combination does not lead to the claimed invention. Accordingly, Applicants respectfully request the rejection be withdrawn.

Claims 57-59 and 80-82 stand rejected as obvious over the Bonk and Camilleri references as applied above and further in view of the Bonk '026 patent. Applicants respectfully submit that the Bonk '026 patent does not make up for the deficiencies of the combined references discussed above. Accordingly, Applicants respectfully traverse the rejection and request the rejection be withdrawn.

Claims 62, 64, 83 and 85 are rejected over the Bonk and Camilleri references as applied above and further in view of the Meyer reference (U.S. Patent 4,999,213). Applicants respectfully submit that the Meyer reference does not make up for the deficiencies of the combined Bonk and Camilleri references discussed above. Accordingly, Applicants respectfully request the rejection be withdrawn.

Claims 63 and 84 are rejected over the combined references and further in view of the Cook reference. As before, the Cook reference does not make up for the deficiencies of the combined references. Applicants respectfully request the rejection be withdrawn.

DOUBLE PATENTING REJECTIONS

Claims 54-64 and 75-85 are rejected for obvious type double patenting over claims 28-54 of co-pending Application 10/633,764 in view of the Camilleri reference. As stated in the Office Action, the claims of the co-pending Application do not recite the gel reducing agent. The deficiencies of the Camilleri reference with regard to the claimed invention are discussed above. In view of those deficiencies, Applicant respectfully requests the double patenting rejection be withdrawn.

CONCLUSION

For the reasons discussed above, Applicant believes that claims 54-64 and 75-85 are in state of allowability and respectfully request an early Notice of Allowance. The Examiner is invited to telephone the undersigned if that would be helpful to resolve any issues.

Respectfully submitted,

Dated: March 19, 2008

By: /Mark A. Frentrup/
Anna M. Budde
Reg. No. 35,085
Mark A. Frentrup
Reg. No. 41,026
Attorneys for Applicants

HARNESS, DICKEY & PIERCE, P.L.C.
P.O. Box 828
Bloomfield Hills, Michigan 48303
(248) 641-1600

MAF/cg